

IN THE CLAIMS

Please amend the claims as indicated below:

1-13. (Cancelled)

Please add new claims as follows:

14. (New) A method of making a solid-state image pickup device comprising the steps of:

providing in a surface layer portion of a substrate a light receiving sensor portion which performs photoelectric conversion;

using a plasma CVD process, providing in a layer above said light receiving sensor portion an in-layer lens which converges incident light to said light receiving sensor portion; and

using a plasma CVD process, providing an antireflection film on said in-layer lens; and

providing a color filter over said antireflection film,

wherein,

said antireflection film is formed of material having a refractive index which is an intermediate value between the refractive index of said in-layer lens and the refractive index of said color filter.

15. (New) The method of claim 14, comprising the further steps of providing a charge transfer portion which transfers signal charge read out from said light receiving sensor portion, and providing a transfer electrode which.

16. (New) The method of claim 14, comprising the further step of: including an on-chip lens at the upper side of said color filter layer.

17. (New) The method of claim 14, comprising the further step of including an interlayer film below said in-layer lens through another antireflection film below said in-

layer lens, wherein said other antireflection film is formed of material having a refractive index which is an intermediate value between the refractive index of said in-layer lens and the refractive index of said interlayer film.

18. (New) The method of claim 14 comprising the further step of providing an interlayer film between said light receiving sensor portion and said antireflection film, said antireflection film formed of material having a refractive index which is an intermediate value between the refractive index of said in-layer lens and the refractive index of said interlayer film.

19. (New) The method of claim 18, comprising the further steps of: (a) including a charge transfer portion which is provided in the surface layer portion of said substrate and which transfers signal charge read out from said light receiving sensor portion, and (b) including a transfer electrode which is provided on an insulation film over said substrate so that said electrode is located substantially just above said charge transfer portion.

20. (New) The method of claim 18, comprising the further step of including a color filter layer disposed above said in-layer lens.

21. (New) The method of claim 20 comprising the further step of providing an on-chip lens disposed above said in-layer lens.

22. (New) The method of claim 18, wherein said color filter layer is provided through another antireflection film on said in-layer lens, and said the other antireflection film is formed of material having a refractive index which is an intermediate value between the refractive index of said in-layer lens and the refractive index of said color filter layer.

23. (New) A method of making a solid-state image pickup device comprising the steps of:

providing in a surface layer portion of a substrate a light receiving sensor portion which performs photoelectric conversion;

providing an interlayer film on said light receiving sensor portion; and

using a plasma CVD process, providing on said interlayer film an in-layer lens and antireflection film which converges incident light through said antireflection film onto said light receiving sensor portion,

wherein,

said antireflection film is formed of material having a refractive index is an intermediate value between the refractive index of said in-layer lens and the refractive index of said interlayer, and

said in-layer lens and said antireflection film are formed by plasma CVD method.

24. (New) The method of claim 23 comprising the further steps of: (a) providing in the surface layer portion of said substrate a charge transfer portion which transfers signal charge read out from said light receiving sensor portion, and (b) providing a transfer electrode and an insulation film on said substrate such that the transfer electrode is located substantially just above said charge transfer portion.

25. (New) The method of claim 23 comprising the further step of providing a color filter layer disposed above said in-layer lens.

26. (New) The method of claim 23 comprising the further step of providing an on-chip lens disposed above said in-layer lens.

27. (New) The method of claim 25 comprising the further step of providing another antireflection film on said in-layer lens over which said color filter is provided, and said the other antireflection film is formed of material having a refractive index which is an intermediate value between the refractive index of said in-layer lens and the refractive index of said color filter layer.